

FLAMMABLE VAPOUR DETECTOR SYSTEM
FOR HOT WATER HEATER

ABSTRACT

A flammable vapour detector system is comprised of a thermocouple which is mounted in a combustion chamber of a hot water heater. A combustion air intake means supplies combustion air to the combustion chamber. A gas burner is provided in the combustion chamber. A gas supply line is secured to the gas burner. An external gas valve is provided in the supply line. A gas valve control circuit controls the ON/OFF state of the external gas valve. The gas valve control circuit is connected to the thermocouple. The thermocouple is exposed to the combustion chamber to sense the temperature therein and is set to cause the control circuit to shut off the external gas valve when the temperature in the combustion chamber reaches a set predetermined temperature value upon burning flammable vapours as they propagate in the combustion chamber through the combustion air intake means.